UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/586,433	06/02/2000	Ulrich Bortfeld	252/024	7379

25700	7590	03/23/2004

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EXAMINER
CRAIG, DWIN M

ART UNIT	PAPER NUMBER
2123	7

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>02 June 2000</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-17</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-17</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>02 June 2000</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
    since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
    37 CFR 1.78.
    a) ☐ The translation of the foreign language provisional application has been received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
    reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1.   Claims 1-17 have been presented for examination. Claims 1-17 have been examined and

rejected.

Nonstatutory Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome

an actual or provisional rejection based on a statutory double patenting ground provided the

conflicting application or patent is shown to be commonly owned with this application. See 37

CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal

disclaimer. A terminal disclaimer signed by the assignee must comply with 37 CFR 3.73(b).

2.   **Claim 1** is rejected under the judicially created doctrine of obviousness-type double

patenting as being unpatentable over **Claim 1** of co-pending **Application 09/586325.** Although

the conflicting claims are not identical, they are not patentably distinct from each other because,

in **Claim 1** of **Application 09/586433** the Applicant discloses a method of simulating a system

with at least two components where one component is a programming model of memory and

another component is a programming model of a processor. **Claim 1** in **Application 09/586325**

is describing a method of simulating a system with at least two components. Both **Claim 1** of

Application 09/586433 and **Claim 1** of **Application 09/586325** are directed to simulating a

system design, the Examiner asserts that the only difference between the two claims is that the

two components modeled in the design are a processor and a memory. It would have been

obvious, to one of ordinary skill in the art, to model the two components in the system as a

processor and a memory.

This is a provisional obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

Specification - Improper Incorporation by Reference

3.   The attempt to incorporate subject matter into this application by reference an

applications (**page 1**, specification), is improper because there is insufficient identification so as

to direct the Examiner or future potential readers to the referenced material. The Examiner

requires this information in order to properly review Applicant's specification. Furthermore, if

the current application issues as a patent before the application, Applicants will be required to

physically incorporate the incorporated material into the instant specification. Please refer to

section 608.01(p) which recites:

> Mere reference to another application, patent, or
> publication is not an incorporation of anything therein into the
> application containing such reference for the purpose of the
> disclosure required by 35 U.S.C. 112, first paragraph. In re de
> Seversky, 474 F.2d 671, 177 USPQ 144 (CCPA 1973). **In addition to
> other requirements for an application, the referencing
> application should include an *identification* of the referenced
> patent, application, or publication.** Particular attention should
> be directed to specific portions of the referenced document where
> the subject matter being incorporated may be found. Guidelines
> for situations where applicant is permitted to fill in a number
> for Application No. _____ left blank in the application as
> filed can be found in In re Fouche, 439 F.2d 1237, 169 USPQ 429
> (CCPA 1971) (Abandoned applications less than 20 years old can be
> incorporated by reference to the same extent as copending

applications; both types are open to the public upon the referencing application issuing as a patent. See MPEP § 103).

Specifically, the Examiner requires the Applicant to provide the serial number, in this case **09/586325,** of the non-provisional Patent Application entitled "METHOD AND APPARATUS FOR ACCELERATING HARDWARE SIMULATION" listed on **page 1** of the specification into this Application.

REJECTIONS

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Independent **Claims 1, 7, 11, 12 and 15** and **dependent Claim 2** are rejected under **35 U.S.C. 102(b)** as being clearly anticipated by **"Synthesis and Simulation of Digital Systems Containing Interacting Hardware and Software Components**, by Rajesh K. Gupta, Claudionor Nunes Coelho, Jr., and Giovanni De Micheli," hereafter reffered to as the *Gupta et al.* reference.

4.1   As regards independent **Claims 1, 7, 11, 12 and 15** the *Gupta et al.* refernece discloses, a unified simulation design/program product/method for simulating system design **(page 225),** identifying a memory component and a processor component of a system design **(Figure 2 and pages 225-226),** associating said software component with said programming model of said memory component within a simulation environment **(pages 228-230 section 4 Simulation of Hardware-Software Systems),** executing said system design and

said application program in said simulation environment **(Figure 7 page 230 and section 5**

Conclusions).

  4.2 As regards dependent **Claim 2** the *Gupta et al.* refernece teaches

generating cycle accurate information **(pages 227-228).**

5. **Claims 1-17 are rejected** under **35 U.S.C. 102(b)** as being unpatentable over **Ball U.S.**

Patent 5,615,357.

  5.1 As regards independent **Claims 1, 7, 11, 12 and 15** the *Ball* reference discloses, a

unified simulation design/program product/method for simulating system design **(Figure 5A),**

identifying a memory component and a processor component of a system design **(Figure 2, Col.**

6 Lines 54-67), associating said software component with said programming model of said

memory component within a simulation environment **(Col. 6 Lines 36-51),** executing said

system design and said application program in said simulation environment **(Col. 12 Lines 22-**

55).

  5.2 As regards dependent **Claims 2, 13 and 16** the *Ball* refernece discloses cycle

accurate information **(Figures 3B, 5A Item 60).**

  5.3 As regards dependent **Claims 3, 8 and 9** the *Ball* refernece discloses high level

functions calls and software *links* between the different executing modules **(Col. 3 Lines 26-67,**

Col. 4 Lines 1-34, Col. 6 Lines 35-67).

  5.4 As regards dependent **Claims 4-6** the *Ball* refernece discloses **(Col. 9 Lines 56-**

65, Col. 10, 11, 12, 13, Figures 3A, 3B, 4A, 4B, 5A, 6A, 6B, 6D).

5.5   As regards dependent **Claim 10** the *Ball* reference discloses a clock **(Figure 3B CYCLES).**

5.6   As regards dependent **Claim 14** the *Ball* reference discloses sets of instructions **(Figures 3B, 4A, 4B).**

5.7   As regards dependent **Claim 17** the *Ball* reference discloses instructions associated with the memory model **(Figure 4A Item 26: LOAD MEM, Col. 10 Lines 54-64).**
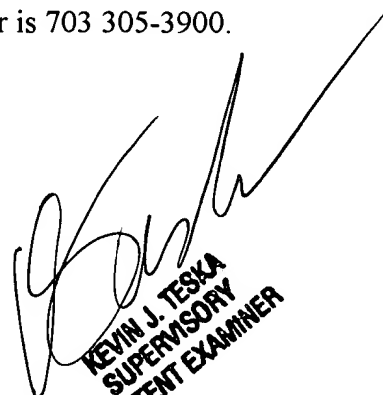
Conclusion

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M Craig whose telephone number is 703 305-7150. The examiner can normally be reached on 9:00 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on 703 305-9704. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-3900.

DMC